

MEETING MINUTES
ESTIMATING BACKGROUND AT ROCKY FLATS PLANT
SPEAKER: RICHARD GILBERT
HELD JUNE 7, 1993

Meeting Attendees:

Rick Roberts(EG&G)	Diane Niedzwiecki(CDH)
Beverly Ramsey(SMS)	Mary A. Siders(EG&G)
Richard DeGrandchamp(PRC)	Fred A. Harrington(EG&G)
Bonnie Lavelle(EPA)	Dennis Smith(EG&G)
Amy E. Johnson(CDH)	Jeffrey Bray(EG&G)
Ralph Lindberg(EG&G)	Jeb Love(CDH)
Denny Weier(EG&G)	Tim O'Rourke(EG&G)
Jen Pepe(DOE/ERD)	Gary Kleeman(EPA)
Mike Garsuchi(EPA)	Cindy Gee(EG&G)
Joe Schieffelin(CDH)	Jeff Swanson(CDH)
Terry Jack(IMAC), Facilitator	Bruce Thatcher(DOE)

1. Expectations

- An agreement in methodology for comparison of background concentrations for Remedial Investigations on Operable Units
- A meeting which considers technical issues, not political
- A need to be pragmatic in approach to achieve efficiency
- An agreement on what is background at Rocky Flats Plant
- Receive opinion on sensitivity decisions to definition of background
- Communication between agencies concerning methods

2. DOE/EG&G APPROACH

(Dennis Smith)

Information collected during Remedial Investigations is used for Human Health Risk Assessment, Environmental Evaluation Risk Assessment, Nature and Extent, Modelers, and Regulatory Compliance Analysis. The tools for these information users include UTL comparisons; Spatial, Temporal, and Gradient distributions; and ANOVA measurements. These tools are used in comparison of Contaminants of Concern(COC) to background concentrations.

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

ADMIN RECORD

A-SW-000693

3. EPA POSITION

(Bonnie Lavelle)

Objective is to have a background comparison method which minimizes professional judgement. Elimination of contaminants should occur when levels are below background, not by use of professional judgement. EPA feels that UTL and 5% rule do not represent the samples entirely. Gilbert agrees that 5% rule should not be used for removing data.

4. CDH POSITION

(Jeff Swanson)

CDH does not have a position on the appropriate method for background comparison. An effective method would be one which produces a defensible document for the public and one which involves communication between agencies.

5. Ralph Lindberg explained the location and sampling techniques used at Rock Creek.

Question:

Is Rock Creek good for background comparison?

Answer:(Ralph)

There is a possibility that airborne particles reach surficial soils in the Rock Creek area. (Radionuclides) Questions exist concerning possible contamination from upgradient railroad tracks.

6. Richard Gilbert explained concepts used in defining background
(see copies of overhead projections)

- Two Concepts of "Background"
- Approach to Comparisons
- Criteria for Selecting A Test
- Issues in Comparing Site to Background
- Parametric and Nonparametric testing
- Tolerance Interval Approach
- Density Distribution comparing Background to Cleanup areas

7. Discussion of background characterization completed at Westinghouse-Hanford (see copies of overhead projections)

8. Richard Gilbert explained concepts used in comparison to background

Question(Dennis)

What procedures do you follow when running separate analyses of common data and receiving different answers(P Values)?

Answer(Richard Gilbert)

- Examine data to determine context
- Using judgement, determine best test
- May be a need for more data

(Gilbert) UTL is an indicator, should not be used to make decisions.

9. Recommendations in Statistical Discussion and Process

1. Develop rationale for each "test" in tool box
2. Do multiple "tests" in above context
3. Use tests with minimum assumptions unless you can validate assumptions
4. Use UTL as a screening tool indicator, never as a definitive test
5. Include graphical and descriptive methods in tool box
6. Develop better understanding of performance of tools in tool box
7. Reach consensus on the site distributors important to detect
8. Use DQO process in future
9. Institutionalize "team approach" to planning
10. Don't forget Phase III (Geologic Knowledge)

(Gilbert) If all concentrations are under UTL(dependent upon number of samples) then there is no contamination problem

- spatial, temporal, and seasonal conditions may act as exceptions

10. Mary Siders explains Selection of Statistical Method for Comparison of Background and Nonbackground Populations flowchart

- used as a screen, not as a definitive test

11. Gilbert recommends use of Helsel method for non-detect samples

12. Statistics Flowchart(1), Geosciences Flowchart(2), and Gilbert Approach(3) were discussed as method options for background comparison

13. Beverly Ramsey proposed Richard Gilbert, as a contractor of DOE, to develop a methodology for background comparison which can be used for future Operable Units(OU).

Comments on Proposal:

EPA(Lavelle)

A May 20, 1993 stated EPA favored a third party opinion. Gilbert completing the proposed methodology will follow their concerns in the letter.

CDH(Swanson)

Agrees the use of Gilbert will be beneficial

DOE(Thatcher)

In favor of having third party arbitrator

Items Made Deliverable to Richard Gilbert:

OU 7 data from Tim O'Rourke

OU 1 data from Gary Kleeman

Background data from Mary Siders

Field Sampling and Analysis Plan from workplans of OU 1 and OU 7

* Most data will be given to Gilbert by end of day on 7/8/93 in a statistically and graphically useable manner("cleaned up" data)

Gilbert is to complete a detailed recommendation for background comparison and a general flowchart for future by July 31.

Attendees

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